

ABSTRACT OF THE INVENTION

An aspect of the present invention provides a method of manufacturing a semiconductor device, including, forming an insulating film on a silicide layer formed at the surface of a silicon semiconductor substrate, etching the insulating film to form a contact hole in which the silicide layer is exposed, forming a metal nitride film on the bottom and side wall of the contact hole, carrying out a first heating process at 600°C or lower on the substrate, carrying out, during the first heating process, a second heating process for 10 msec or shorter with light whose main wavelength is shorter than a light absorbing end of silicon, forming a contact conductor in the contact hole after the second heating process, and forming, on the insulating film, wiring that is electrically connected to the substrate through the contact conductor.